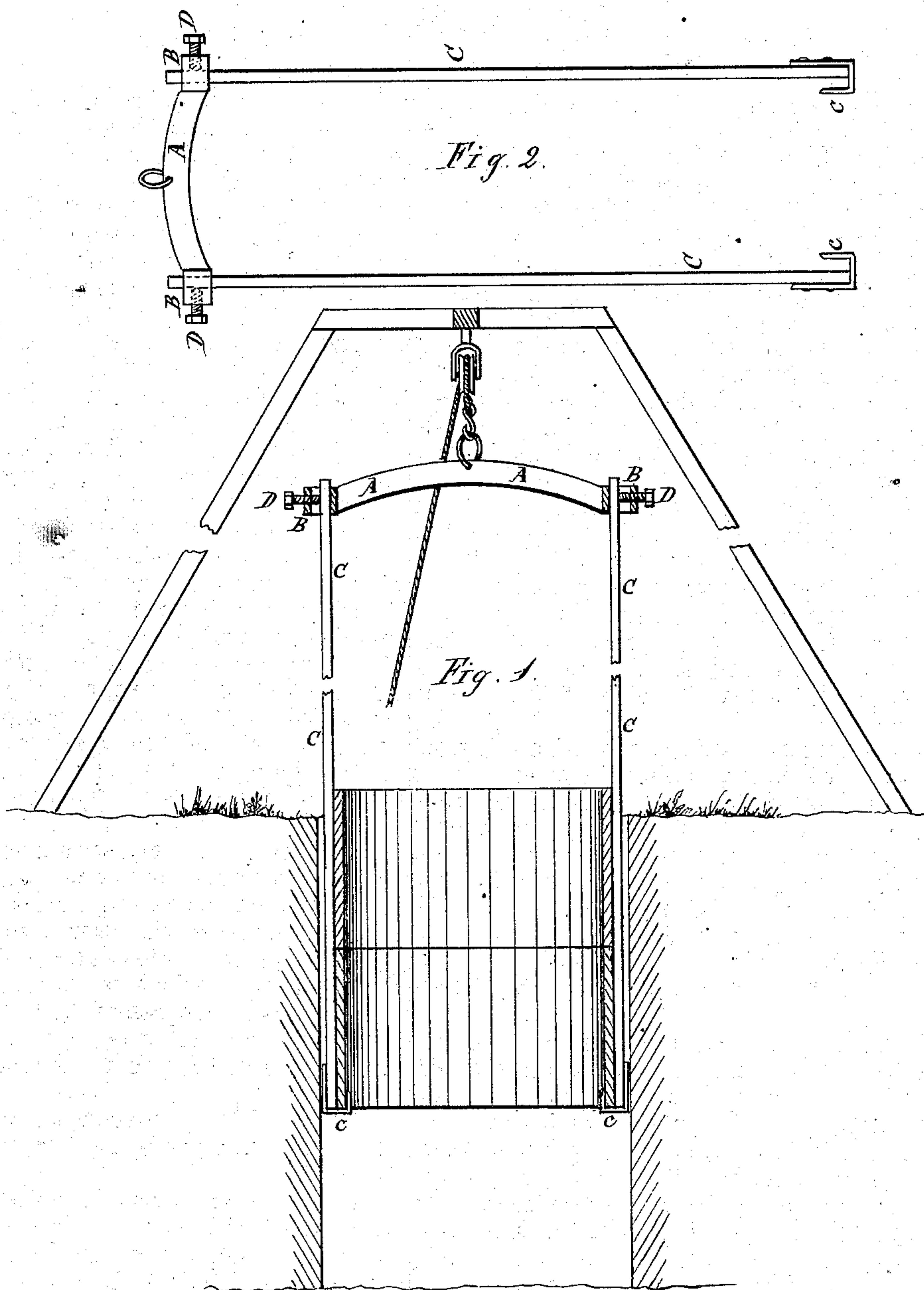


D. L. NEWCOMB.
Lining-Wells.

No. 158,434.

Patented Jan. 5, 1875.



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UNITED STATES PATENT OFFICE.

DAVID L. NEWCOMB, OF KENTON, OHIO.

IMPROVEMENT IN LINING WELLS.

Specification forming part of Letters Patent No. **158,434**, dated January 5, 1875; application filed September 23, 1874.

To all whom it may concern:

Be it known that I, DAVID L. NEWCOMB, of Kenton, county of Hardin and State of Ohio, have invented certain Improvements in Means for Tubing or Lining Wells, of which the following is a specification:

My invention relates to an improved method and means for lining and tubing wells, and has for its object not only to greatly facilitate such lining or tubing, but also to obviate the necessity of sending workmen into the wells for the purpose of cementing together the sections of pipe as they are let down, thereby obviating all accident from the caving in of the sides of such wells.

The practice heretofore has been to line or tube wells after having been bored or excavated from the bottom upward by letting down one section of pipe after another and cementing them together, for which purpose workmen had to descend into the wells, whose life or limbs were constantly endangered by the accidental caving in upon them of the sides of the well.

By my improved method and means the operation is reversed—that is to say, the wells, after having been bored, are lined or tubed from top downward, cementing one section of pipe to another as they are let down into the well, thus greatly facilitating the work, and without endangering the life of the workmen.

But that my invention may be fully understood, I will proceed to describe the same in detail by aid of the accompanying drawings, in which—

Figure 1 is a sectional elevation of a well, showing the method and apparatus for tubing the same; and Fig. 2 is a vertical elevation of the apparatus employed in tubing wells.

A is a cross bar or beam, made of any suitable or convenient material. This cross bar or beam A is provided with or has formed thereon, on each side, a box-like casing, B, in which the strips of wood C are inserted and held in position by means of set-screws D. Then pieces of wood C are provided at their lower extremity with a hook or projection, *c*, on which the first section of pipe or tubing is set between the two strips of wood, C. The center of the cross bar or beam A is provided with a hook or ring, *a*, which is hooked or attached to a rope, F, traveling over a pulley, G, made fast to a suitable scaffolding, H,

erected over the well. Instead of the pieces of wood or slats C, metallic strips or ropes or chains may be used equally as well.

The operation is as follows: The strips of wood C, of a length of the depth of the well, are inserted into the box-like casing B, formed on the cross bar or beam A, and made fast therein by means of the set-screws D. The cross-bar is then attached or hooked to the rope F traveling over the pulley G, when the slats or pieces of wood are hoisted until they hang over the orifice of the well. The first section of pipe or tubing is then inserted between the two strips of wood C, causing such pipe or tube to rest on the hook or projection affixed to or formed on the lower extremities of the two pieces of wood or slats C, when the first section of pipe is lowered into the well until its upper surface is flush with or a little above the orifice of such well, when the second section is cemented to the top of the first one, and the two lowered again, as before explained. Thus section after section of pipe or tubing is added until the well is completely lined. The two strips of wood are allowed to remain in the bore; or, if a rope is used, it may be cut and extracted in any convenient manner.

When a well is to be lined with brick masonry the strips of wood or metal C are provided with horizontal projecting plates, and a ring of wood or metal of the desired width is laid on those projecting plates as a foundation to the brick masonry, which is lowered into the well as the work progresses, and in that case the cross beam or bar A is provided with additional arms, according to the diameter of the well.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

The mode of lining or tubing wells from top downward by means of a cross bar or beam, A, in combination with strips of wood or metal, or ropes or chains, C, made fast to and supported by said cross bar or beam A, the rope and tackle F G, and a suitable scaffold, substantially as shown and described.

Kenton, Ohio, September 14, 1874.

DAVID L. NEWCOMB.

Attest:

F. M. CHILDS,
W. M. STIMOND.